# THE JAPANESE JOURNAL OF *Pharmacology*

*Official Publication of the Japanese Pharmacological Society*

Edited for the Society

by

Shuji TAKAORI *(Chief Editor)*
Masashi SASA *(Press Editor)*
Yasushi ABIKO
Chiyoko INAGAKI
Haruo ITO
Makoto KATORI
Hirosi KURIYAMA
Kinya KURIYAMA
Chikako TANAKA

**VOLUME 33**

**1983**

PUBLISHED BY

THE JAPANESE PHARMACOLOGICAL SOCIETY

*Bimonthly*

Secretarial Office: Department of Pharmacology, Faculty of Medicine, University of Tokyo, Tokyo
Editorial Office: Department of Pharmacology, Faculty of Medicine, Kyoto University, Kyoto

# AUTHOR INDEX


Abe, C.
*See* Goto, K.
Abe, S.
*See* Murakami, M.
Abe, Y., Yukimura, T., Iwao, H., Mori, N., Okahara, T. and Yamamoto, K.
Calcium antagonist and renin release 627
Adachi, J. and Mizoi, Y.
Alcohol sensitivity and catecholamine 531
Ahn, H.Y.
*See* Karaki, H.
Aihara, H.
*See* Araki, H.
*See* Kurachi, M.
*See* Muramatsu, M.
*See* Nakaike, S.
Aizawa, Y.
*See* Kogo, H.
Akiba, I., Endou, H., Suzuki, T., Yanaura, S. and Sakai, F.
Morphine and sex-dependent proteins 309
Akutagawa, K., Makino, Minoru and Ishii, Kenji
$Ca^{2+}$-antagonistic effects of flurazepam 845
Ando, J.
*See* Ishii, Kenji
*See* Kano, T.
Aniya, Y. and Matsusaki, K.
Enhancement of aniline hydroxylation 795
Salt effect on drug metabolism 647
Apatoff, B.R.
*See* Riker, W.K.
Araki, H., Aihara, H., Watanabe, S., Ohta, H., Yamamoto, Tsuneyuki and Ueki, S.
Hippocampal kindling and noradrenergic system 57
Araki, H., Aihara, H., Watanabe, S., Yamamoto, Tsuneyuki and Ueki, S.
Hippocampal kindling and brain monoamines 1177
Asakawa, T.
*See* Higuchi, M.
Asami, M.
*See* Nakagawa, K.
Asano, Makishige, Ohkubo, C. and Sawanobori, K.
Microvascular effect of trimetazidine 891
Asano, Masahisa and Hidaka, H.
Sulfhydryl reagents on $Ca^{2+}$-induced contraction 145
Sulfhydryl reagents on pharmacological receptor systems 227
Ashida, T.
*See* Tanaka, T.

Bhargava, K.P.
*See* Pant, K.K.

Chiba, S., Kobayashi, Miyoharu and Shimotori, M.
ATP effect on dog SA node 495
Chronotropic effects of ATP on dog atria 1191
Chiba, S., Watanabe, Hidehiko, Kobayashi, Miyoharu and Iwatsuki, K.
Dobutamine on heart 113

Dabasaki, T.
*See* Kamei, C.
Daikoku, M.
*See* Nagai, H.
Deguchi, F.
*See* Tanaka, T.
Doteuchi, M.
*See* Mizui, T.

Egashira, T.
*See* Yamamoto, Toshinori
*See* Yamanaka, Y.
Egawa, M.
*See* Tobe, A.
Endoh, M.
Positive inotropic effect of dopamine 897
Endou, H.
Cytochrome P-450 monooxygenase system in the nephron 423
*See* Akiba, I.
*See* Hasumura, S.

Foong, F.-W. and Satoh, M.
Drugs on bradykinin-induced trigeminal pain 933
Fu, L.H.W. and Toda, N.
Serotonin and tryptamine on isolated arteries 473
Fuchino, K.
*See* Hironaka, T.
Fujii, T.
*See* Hironaka, T.
Fujimoto, Y.
*See* Toibana, E.
Fujimura, H.
*See* Kyuki, K.
*See* Tsurumi, K.
Fujino, S. and Tsukada, H.

Subcellular distribution of $^{3}H$-digitoxin 765
Fujisaki, H.
*See* Murakami, M.
*See* Oketani, K.
Fujita, A.
*See* Hayashi, M.
Fujita, T.
*See* Toibana, E.
Fujitani, B., Maeda, J., Tsuboi, Toshimichi, Kadokawa, T. and Shimizu, Masanao
Effect of gliclazide on $PGI_2$ formation 965
Fukawa, K., Kawano, O., Misaki, N., Uchida, M. and Irino, O.
Endoscopy of gastric ulcers 175
Fukuda, H.
*See* Goto, M.
*See* Saito, K.
Fukuda, T. and Tsumagari, T.
Rage responses and psychotropic drugs 885
Fukunaga, K.
*See* Matsui, K.

Girimaldi, G.
*See* Maggi, C.A.
Gomita, Y., Ichimaru, Y. and Moriyama, M.
Benzodiazepines and self-stimulation 498
Goto, K.
*See* Yanaura, S.
Goto, K., Hisadome, M., Terasawa, M., Kadobe, Y., Abe, C. and Shiokawa, Y.
Immunopotentiating action of traxanox 189
Goto, M.
*See* Saito, K.
Goto, M., Ono, Hideki, Matsumoto, Kinzo, Kondo, Mitsuru and Fukuda, H.
CNS effect of zopiclone 1241
Goto, Y.
*See* Watanabe, K.
Gotoh, H.
*See* Nakayama, S.
Gurtu, S.
*See* Pant, K.K.

Hagino, Y.
*See* Ishikawa, N.
Hara, S.
*See* Nishino, K.
Harada, M.
*See* Ozaki, Y.
Hashimoto, Keitaro
*See* Satoh, Hiroyasu
Hashimoto, Keitaro, Shibuya, Toshiyuki and Imai, S.
Prostaglandins and ischemic arrhythmia 1035
Hashimoto, Koroku
*See* O'hara, N.
Hasumura, S., Endou, H., Kakuno, K., Hojo, K. and Sakai, F.
P-450 from liver and kidney microsomes 999
Hata, T.
*See* Kita, T.
Hatta, S.
*See* Ohshika, H.
Hattori, K., Shimoura, K. and Toda, N.
Cd-induced inhibition of Ca uptake 655
Hayama, T.
*See* Shimoda, M.
Hayashi, E.
*See* Yamanaka, K.
Hayashi, M., Fujita, A. and Satoh, S.
Action of NE and PHE on PG production 563
Hibasami, H.
*See* Shimura, K.
Hidaka, H.
*See* Asano, Masahisa
Higashi, K.
*See* Matsui, K.
Higuchi, H., Matsumoto, Kazuo, Uchida, S. and Yoshida, H.
Muscarinic receptor in decensitization 702
Higuchi, M. and Asakawa, T.
Pentobarbital and plasma catecholamines 209
Himori, N.
*See* Iwamura, M.
Hiramori, T.
*See* Tagashira, E.
Hirata, M. and Inamitsu, T.
Diltiazem on $Ca^{2+}$ release from SR 991
Hirobe, M.
*See* Konno, F.
Hironaka, T., Fuchino, K. and Fujii, T.
The benzodiazepine receptor in the rat 95
Hirota, K.
*See* Uchida, K.
Hisadome, M.
*See* Goto, K.
Hobara, R., Kato, Hitoshi and Sakamoto, K.
Thiamine levels in diabetes mellitus 27
Hojo, K.
*See* Hasumura, S.
Hojo, Y.
*See* Ishikawa, N.
Hosokawa, T.
*See* Yanaura, S.
Hotta, K.
*See* Oketani, K.

Ichikawa, A.
*See* Negishi, M.
Ichimaru, Y.
*See* Gomita, Y.
Iizuka, M.

*See* Yamada, K.
Ikeda, M.
*See* Tanaka, T.
Imai, S.
*See* Hashimoto, Keitaro
*See* Nagatomo, T.
Imaizumi, Y. and Watanabe, M.
4-Aminopyridine and canine tracheal smooth muscle 201
TMA, TEA and TPA and canine trachea 155
Imazu, C.
*See* Nakamura, H.
Inagaki, C.
*See* Ishiko, J.
Inai, Y.
*See* Murakami, M.
Inamitsu, T.
*See* Hirata, M.
Inatomi, N. and Maki, Y.
Prostaglandins and gastric mucosal blood flow 1263
Inoki, R.
*See* Ohkubo, T.
*See* Tsai, H.-Y.
Irikura, T.
*See* Nishino, K.
Irino, O.
*See* Fukawa, K.
Ishii, Katsumi
*See* Nakamura, H.
Ishii, Kenji
*See* Akutagawa, K.
*See* Kano, T.
Ishii, Kenji, Kano, T. and Ando, J.
Effects of flurazepam and diazepam 65
Ishii, Y.
*See* Takayanagi, I.
Ishikawa, N., Taki, K., Hojo, Y., Hagino, Y. and Shigei, T.
Pulmonary circulation in dog heart-lung preparation 785
Ishikawa, Y.
*See* Uchida, K.
Ishiko, J., Inagaki, C. and Takaori, S.
Benzodiazepines on dopamine turnover 706
Ishimori, T.
*See* Iwamura, M.
Ishitani, R.
*See* Karasawa, A.
Itami, T. and Kanoh, S.
Endotoxin and serum protein binding 1199
Ito, Haruo
*See* Okabe, E.
Ito, Hitoshi
*See* Shimura, K.
Ito, J.
*See* Takatani, T.
Ito, M.
*See* Okamoto, K.
Ito, M., Yamada, H., Okamoto, K. and Suzuki, Yoshio
Crescentic type nephritis in rats 1145
Itoh, A.
*See* Yajima, M.
Itoh, E.
*See* Kita, T.
Iwaki, K.
*See* Yonetani, Y.
Iwamoto, T.
*See* Nagai, H.
Iwamura, M., Ishimori, T., Makino, Masao, Yasuda, K., Izumi, A. and Himori, N.
Platelet aggregation and β-blockers 219
Iwao, H.
*See* Abe, Y.
Iwatsuki, K.
*See* Chiba, S.
Izumi, A.
*See* Iwamura, M.
Izumi, R., Takahashi, M. and Kaneto, H.
Stress-induced analgesia (SIA) 1104

Kadobe, Y.
*See* Goto, K.
Kadokawa, T.
*See* Fujitani, B.
*See* Nakamura, H.
Kakihana, M., Shino, A. and Nagaoka, A.
Cardiovascular responses to brain ischemia 17
Kakuno, K.
*See* Hasumura, S.
*See* Yanaura, S.
Kamei, C., Dabasaki, T. and Tasaka, K.
Histamine and catalepsy 1081
Kamei, J.
*See* Yanaura, S.
Kamijo, K.
*See* Kinemuchi, H.
*See* Yasuhara, H.
Kanbayashi, M.
*See* Kunihara, M.
Kaneto, H.
*See* Izumi, R.
Kano, T.
*See* Ishii, Kenji
Kano, T., Ishii, Kenji, Kurobe, Y. and Ando, J.
Estradiol uptake and cyclic GMP 525
Kanoh, S.
*See* Itami, T.
Karaki, H., Ahn, H.Y. and Urakawa, N.
Hyperosmolarity-induced contraction 246
Karasawa, A. and Ishitani, R.

Tryptamine binding to myelin proteolipids 492
Karasawa, A., Kim, S.-J. and Ishitani, R.
Tryptamine binding to lipids 181
Kato, Hitoshi
*See* Hobara, R.
Kato, R.
*See* Sasakawa, N.
Kato, Y.
*See* Mori, H.
Katoh, Hiroshi
*See* Kimura, I.
Kawabata, N., Sugiyama, S., Kuwamura, T., Satoh, T. and Kitagawa, H.
L-CYS effects on FT and 5-FU levels 735
Kawaguchi, A., Niwa, M. and Ozaki, M.
Probenecid increases adrenal DOPAC 611
Kawano, O.
*See* Fukawa, K.
Kawasaki, K. and Matsushita, A.
$\beta$-Carbolines and crossed extensor reflex 694
Kemi, M.
*See* Maki, E.
Kigoshi, S., Nishio, M. and Kokubo, M.
Effect of antitussives on tumor cells 343
Kim, S.-J.
*See* Karasawa, A.
Kimura, I., Katoh, Hiroshi and Kimura, M.
$\beta_1$-, $\beta_2$-effect on Ca spike suppression 1271
Kimura, M.
*See* Kimura, I.
Kinemuchi, H., Sunami, Y., Ueda, T., Morikawa, F. and Kamijo, K.
Inhibition of MAO activity by some detergents 1007
Kita, T., Hata, T., Namimatsu, A. and Itoh, E.
Denervation-supersensitivity and neurotropin 291
Kitada, Y., Miyauchi, T., Kosasa, T. and Satoh, S.
$\beta_1$-adrenergic mechanisms and desipramine 867
Kitagawa, H.
*See* Kawabata, N.
Kito, J.
*See* Nishino, K.
Kobayashi, Miyoharu
*See* Chiba, S.
Kobayashi, Motoki and Ohata, K.
Kinin in rat stomach 1119
Koda, A.
*See* Kubota, T.
*See* Mori, H.
*See* Nagai, H.
Kogo, H., Sumino, M. and Aizawa, Y.
Effect of oxytocin and estrogen on $PGI_2$ release from uterus 1107
Koike, K.
*See* Takayanagi, I.
Koike, K. and Takayanagi, I.
Intrinsic activity and spare receptors 327
Kokubo, M.
*See* Kigoshi, S.
Kokue, E.
*See* Shimoda, M.
Kometani, A.
*See* Nakajyo, S.
Kondo, Michiko
*See* Maki, E.
Kondo, Mitsuru
*See* Goto, M.
Konno, F. and Takayanagi, I.
Synaptosomal Ca and morphine-antinociception 619
Konno, F., Takayanagi, I. and Hirobe, M.
Opiate-epoxides and opiate receptor 1293
Kontani, H. and Koshiura, R.
Drugs on afferent activity of frog heart 503
Drugs on afferent activity of frog lung 1096
Kosasa, T.
*See* Kitada, Y.
Koshiura, R.
*See* Kontani, H.
Kubota, A., Satoh, M. and Takagi, H.
Ciramadol analgesia 1085
Kubota, K.
*See* Uruno, T.
Kubota, T., Ujiie, A., Naito, J., Nakazawa, M. and Koda, A.
Inhibition of histamine release by N-5' 837
Kumakura, K.
*See* Sasakawa, N.
Kunihara, M., Kanbayashi, M. and Ohshima, T.
Morphine, feeding and water drinking 829
Kurachi, M., Yoshihara, K. and Aihara, H.
Taurine on glu-induced depolarization 1247
Kuribara, H. and Tadokoro, S.
Ambulation and tolerance to scopolamine 1041
Avoidance responses in mice and rats 1127
Circadian susceptibility to scopolamine 927
Kuriyama, K.
*See* Nakagawa, K.
*See* Nakashima, T.
Kurobe, Y.
*See* Kano, T.
Kuroiwa, I.
*See* Terai, M.
Kuroiwa, Y.
*See* Yamamoto, Toshinori
Kurokawa, S.
*See* Yajima, M.
Kuwamura, T.
*See* Kawabata, N.
Kyuki, K., Shibuya, Tomohisa, Tsurumi, K. and Fujimura, H.
Topical effect of diclofenac-Na cream 121

Lai, R.-T., Watanabe, Y. and Yoshida, H.
Influence of aging on α-adrenoceptors in the rat 241
Lim, J.M.E.
*See* Sim, M.K.
Liou, S.Y.
*See* Shibata, S.
Lun, K.C.
*See* Ramabadran, K.

Maeda, J.
*See* Fujitani, B.
Maeda, S.
*See* Tsai, H.-Y.
Maeda-Hagiwara, M.
*See* Watanabe, K.
Maeno, H.
*See* Terai, M.
Maeyama, M.
*See* Matsui, K.
Maggi, C.A., Girimaldi, G. and Meli, A.
$Ca^{++}$ entry blockers and intestinal muscle 335
Maki, E., Kondo, Michiko, Kemi, M. and Tanabe, K.
Carbidopa, autoimmune hemolytic anemia 373
Maki, Y.
*See* Inatomi, N.
Makino, Masao
*See* Iwamura, M.
Makino, Minoru
*See* Akutagawa, K.
Masuda, Y.
*See* Matsubara, T.
Matsubara, T., Mori, S., Touchi, A., Masuda, Y. and Takeuchi, Y.
Different susceptibilities of rat liver lobes 435
Matsubara, T., Otsubo, S. and Yoshihara, E.
Microsomal O-dealkylation reaction 1065
Matsubara, T., Otsubo, S., Yoshihara, E. and Touchi, A.
Assay for 7-alkoxycoumarin O-dealkylase 41
Matsuda, S.
*See* Matsunaga, K.
Matsui, K., Higashi, K., Miyazaki, K., Fukunaga, K., Maeyama, M. and Miyamoto, E.
Hormonal regulation of protein kinases 385
Matsumoto, Kazuo
*See* Higuchi, H.
Matsumoto, Kinzo
*See* Goto, M.
Matsumura, Y., Shimizu, T., Ohno, Y., Miyawaki, N. and Morimoto, S.
Renin release and lipid peroxidation 803
Matsunaga, K., Matsuura, A., Matsuda, S. and Ueda, M.
Effects of propranolol in SHR 1286
Matsuoka, I.
*See* Takatani, T.
Matsuoka, Y.
*See* Uruno, T.
Matsusaki, K.
*See* Aniya, Y.
Matsushita, A.
*See* Kawasaki, K.
Matsuura, A.
*See* Matsunaga, K.
Matsuura, N.
*See* Nagai, H.
Meli, A.
*See* Maggi, C.A.
Misaki, N.
*See* Fukawa, K.
Misawa, M.
*See* Takeda, H.
*See* Yanaura, S.
Miyamoto, A.
*See* Ohshika, H.
Miyamoto, E.
*See* Matsui, K.
Miyamoto, M.
*See* Nagai, Y.
Miyauchi, T.
*See* Kitada, Y.
Miyawaki, N.
*See* Matsumura, Y.
Miyazaki, K.
*See* Matsui, K.
Mizoi, Y.
*See* Adachi, J.
Mizui, T. and Doteuchi, M.
Gastric cytoprotection by polyamines 939
Mizuno, Hiroko
*See* Uchida, K.
Mizuno, Hiroyuki
*See* Yanaura, S.
Momose, Y.
*See* Takeda, R.
Mori, H., Nakatomi, I., Kato, Y. and Koda, A.
New 5-fluorouracil derivatives 1205
Mori, J.
*See* Satoh, Hisashi
*See* Yamamoto, Tsuneyuki
Mori, N.
*See* Abe, Y.
Mori, S.
*See* Matsubara, T.
Morikawa, F.
*See* Kinemuchi, H.
Morimoto, S.
*See* Matsumura, Y.
Moriyama, M.
*See* Gomita, Y.
Murakami, M.

*See* Oketani, K.
Murakami, M., Oketani, K., Fujisaki, H., Wakabayashi, T., Inai, Y., Abe, S., Yamatsu, I. and Ohgo, T.
Acyclic polyisoprenoids and antiulcer 549
Muramatsu, M., Tanaka, Makoto, Otomo, S. and Aihara, H.
Glucocorticoid-binding sites 955

Nagai, H., Iwamoto, T., Nishiyori, T., Takizawa, T., Tsuchiya, H. and Koda, A.
Anti-SRS-A agents 1215
Nagai, H., Nishiyori, T., Daikoku, M. and Koda, A.
Anti-allergic action of SCC 819
Nagai, H., Takizawa, T., Nakatomi, I., Matsuura, N. and Koda, A.
Anti-allergic action of glucocorticoids 349
Nagai, R.
*See* Tobe, A.
Nagai, Y.
*See* Narumi, S.
Nagai, Y., Narumi, S., Miyamoto, M., Saji, Y. and Nagawa, Y.
Effect of DN-1417 on LCGU in rats 635
Nagaoka, A.
*See* Kakihana, M.
Nagase, H.
*See* Ozaki, H.
Nagatomo, T. and Sasaki, M.
$^{3}$H-DHA binding and enzymatic treatment 481
Nagatomo, T., Sasaki, M., Tsuchihashi, H. and Imai, S.
Neuraminidase-treatment and $^{3}$H-DHA binding 851
Nagawa, Y.
*See* Nagai, Y.
*See* Narumi, S.
Naito, J.
*See* Kubota, T.
Nakagawa, K., Asami, M. and Kuriyama, K.
Lead and lysosomal lysis 9
Nakaike, S., Tanaka, C., Tomita, N., Umemoto, M., Otomo, S. and Aihara, H.
Penicillamine-cysteine: Immunomodulation 983
Nakajima, H. and Nosaka, K.
Diltiazem and nitroglycerin on vascular smooth muscle 1282
Nakajyo, S., Shimizu, K., Kometani, A., Suzuki, A., Ozaki, H. and Urakawa, N.
Bassianolide on ACh-contraction in taenia coli 573
Nakamizo, N.
*See* Tanaka, H.
Nakamura, H. and Shimizu Masanao
Physical dependence on meprobamate in rats 1171
Nakamura, H., Imazu, C., Ishii, Katsumi, Yokoyama, Y., Kadokawa, T. and Shimizu, Masanao
Site of analgesic action of zomepirac sodium 875
Nakao, K.
*See* Tagashira, E.
*See* Yanaura, S.
Nakashima, T., Takino, T. and Kuriyama, K.
Taurine and hepatic lipid peroxide 515
Nakatomi, I.
*See* Mori, H.
*See* Nagai, H.
Nakayama, S., Sakashita, M., Tonooka, M., Gotoh, H., Yasuhara, H. and Sakamoto, K.
Cholesterol induced atherosclerosis 279
Nakazawa, M.
*See* Kubota, T.
Namimatsu, A.
*See* Kita, T.
Narumi, S.
*See* Nagai, Y.
Narumi, S., Nagai, Y., Saji, Y. and Nagawa, Y.
TRH and DN-1417 on cyclic nucleotides 915
Negishi, M., Ichikawa, A. and Tomita, K.
A23187 and mastocytoma cell growth 725
Nishibori, M. and Saeki, K.
Cromoglycate and histamine release 1255
Nishino, K., Ohkubo, H., Ohashi, M., Hara, S., Kito, J. and Irikura, T.
KC-404—a new anti-allergic agent 267
Nishio, H. and Segawa, T.
Effect of Con A on blood platelets 79
Nishio, M.
*See* Kigoshi, S.
Nishiyori, T.
*See* Nagai, H.
Niwa, M.
*See* Kawaguchi, A.
Nobuhara, Y.
*See* Takeuchi, K.
Nomoto, T.
*See* Uchida, Y.
Nomura, Y.
Clonidine on locomotion in infant rat 1092
Nosaka, K.
*See* Nakajima, H.
Noshiro, O.
*See* Terai, M.

Odajima, C.
*See* Okabe, E.
Oguchi, K.
*See* Yasuhara, H.
O'hara, N., Ono, Hiroshi and Hashimoto, Koroku
Blood pressure decrease by SQ 14,551 485
Ohashi, M.

*See* Nishino, K.
Ohashi, M. and Takayanagi, I.
Norepinephrine on rabbit basilar artery 249
Spasmolytics on rabbit smooth muscles 1135
Ohata, K.
*See* Kobayashi, Motoki
Ohgo, T.
*See* Murakami, M.
Ohkubo, C.
*See* Asano, Makishige
Ohkubo, H.
*See* Nishino, K.
Ohkubo, T., Shibata, M., Takahashi, H. and Inoki, R.
Pain and inflammatory response of $PGD_2$ 264
Ohmori, H.
*See* Yamamoto, I.
Ohnishi, R.
*See* Toibana, E.
Ohno, Y.
*See* Matsumura, Y.
Ohshika, H., Miyamoto, A., Takemura, H., Hatta, S. and Tanaka, Mamoru
Isoproterenol and $\alpha$-adrenergic response 811
Ohshima, T.
*See* Kunihara, M.
Ohta, H.
*See* Araki, H.
Ohtani, K.
*See* Yanaura, S.
Okabe, E., Todoki, K., Odajima, C. and Ito, Haruo
Free radicals and microcirculation 1233
Okabe, S.
*See* Takeuchi, K.
Okada, T.
*See* Yamanaka, K.
Okahara, T.
*See* Abe, Y.
Okamoto, K.
*See* Ito, M.
Okamoto, K., Ito, M. and Suzuki, Yoshio
Antinephritic effect of mizoribine 541
Okamoto, T.
*See* Yajima, M.
Oketani, K.
*See* Murakami, M.
Oketani, K., Murakami, M., Fujisaki, H., Wakabayashi, T. and Hotta, K.
Geranylgeranylacetone and glycoproteins 593
Ono, Hideki
*See* Goto, M.
Ono, Hiroshi
*See* O'hara, N.
Otomo, S.
*See* Muramatsu, M.
*See* Nakaike, S.
Otsubo, S.
*See* Matsubara, T.
Ozaki, H.
*See* Nakajyo, S.
Ozaki, H., Tomono, J., Nagase, H. and Urakawa, N.
PTX on vascular smooth muscle 1155
Ozaki, M.
*See* Kawaguchi, A.
Ozaki, Y. and Harada, M.
Ganglion blocking action on dog urinary bladder 463

Pant, K.K., Gurtu, S., Sharma, D.K., Sinha, J.N. and Bhargava, K.P.
Locus coeruleus: Cardiovascular effects of morphine 253

Ramabadran, K.
Absence of tolerance to naloxone-hyperalgesia 709
Kappa opioid agonist induced hyperalgesia 1289
Ramabadran, K., Sim, M.K. and Lun, K.C.
Skeletal muscle contractions and opioids 73
Riker, W.K., Apatoff, B.R. and Sasaki, K.
Anticurare effect of 3,4-diaminopyridine 1183

Saeki, K.
*See* Nishibori, M.
Saito, K., Goto, M. and Fukuda, H.
Development of benzodiazepine receptor 906
Saji, Y.
*See* Nagai, Y.
*See* Narumi, S.
Sakai, F.
*See* Akiba, I.
*See* Hasumura, S.
Sakai, Y.
Sleep inducers and $\alpha$- and $\gamma$-motor systems 1017
Sakamoto, K.
*See* Hobara, R.
*See* Nakayama, S.
*See* Yasuhara, H.
Sakanashi, M. and Takeo, S.
Propranolol on coronary artery 603
Sakashita, M.
*See* Nakayama, S.
Sasa, M.
*See* Takatani, T.
Sasakawa, N., Yamamoto, S., Kumakura, K. and Kato R.
Phospholipase $A_2$ and lipoxygenase inhibitor 1077
Sasaki, K.
*See* Riker, W.K.
Sasaki, M.
*See* Nagatomo, T.

Sasano, M.
*See* Yamamoto, I.
Satoh, Hiroyasu and Hashimoto, Keitaro
Ftorafur and 5-FU on the canine SA node 357
Satoh, Hisashi
*See* Yamamoto, Tsuneyuki
Satoh, Hisashi, Satoh, Y. and Mori, J.
Zotepine and rotational behaviour 363
Satoh, M.
*See* Foong, F.-W.
*See* Kubota, A.
Satoh, S.
*See* Hayashi, M.
*See* Kitada, Y.
Satoh, T.
*See* Kawabata, N.
Satoh, Y.
*See* Satoh, Hisashi
Sawanobori, K.
*See* Asano, Makishige
Segawa, T.
*See* Nishio, H.
Sekiguchi, T.
*See* Uruno, T.
Sharma, D.K.
*See* Pant, K.K.
Shibata, M.
*See* Ohkubo, T.
Shibata, S., Liou, S.Y. and Ueki, S.
Amino acids on SCN neuron 1225
Shibuya, Tomohisa
*See* Kyuki, K.
Shibuya, Toshiyuki
*See* Hashimoto, Keitaro
Shigei, T.
*See* Ishikawa, N.
*See* Tsuru, H.
Shimizu, K.
*See* Nakajyo, S.
Shimizu, Masanao
*See* Fujitani, B.
*See* Nakamura, H.
Shimizu, Masao
*See* Watanabe, K.
Shimizu, T.
*See* Matsumura, Y.
Shimoda, M., Tsuboi, Takamitsu, Kokue, E. and Hayama, T.
Nonlinear kinetics of SMM in pigs 903
Shimomura, K.
*See* Yamamoto, Tsuneyuki
Shimotori, M.
*See* Chiba, S.
Shimoura, K.
*See* Hattori, K.
Shimura, K., Ito, Hitoshi and Hibasami, H.
Immunoelectrophoretic screening of antitumor agents 403
Shino, A.
*See* Kakihana, M.
Shiokawa, Y.
*See* Goto, K.
Shoji, T.
*See* Tsuru, H.
Shuto, K.
*See* Tanaka, H.
Sim, M.K.
*See* Ramabadran, K.
Sim, M.K. and Lim, J.M.E.
Adrenergic receptors of rabbit intestine 409
Sinha, J.N.
*See* Pant, K.K.
Sugiyama, S.
*See* Kawabata, N.
Sumino, M.
*See* Kogo, H.
Sunagane, N.
*See* Uruno, T.
Sunami, Y.
*See* Kinemuchi, H.
Sunano, S.
Sodium nitroprusside on vas deferens 489
Suzuhigashi, K.
*See* Takayanagi, I.
Suzuki, A.
*See* Nakajyo, S.
Suzuki, T.
*See* Akiba, I.
Suzuki, Yoshio
*See* Ito, M.
*See* Okamoto, K.
Suzuki, Yukiko and Taguchi, K.
Morphine and the cat cerebellum 671, 681

Tadokoro, S.
*See* Kuribara, H.
Tagashira, E.
*See* Yanaura, S.
Tagashira, E., Hiramori, T., Urano, T., Nakao, K. and Yanaura, S.
$\beta$-Blockers and barbital dependence 133
Tagashira, E., Hiramori, T., Urano, T. and Yanaura, S.
Barbital dependence and brain monoamines 415
Tagashira, E., Urano, T., Hiramori, T. and Yanaura, S.
Barbiturate dependence and psychotropics 659
Taguchi, K.
*See* Suzuki, Yukiko
Takagi, H.
*See* Kubota, A.
Takahashi, H.

*See* Ohkubo, T.
Takahashi, M.
*See* Izumi, R.
Takaiti, O.
*See* Yamada, K.
Takaori, S.
*See* Ishiko, J.
*See* Takatani, T.
Takatani, T., Ito, J., Matsuoka, I., Sasa, M. and Takaori, S.
Diphenhydramine on vestibular nucleus 557
Takayanagi, I.
*See* Koike, K.
*See* Konno, F.
*See* Ohashi, M.
Takayanagi, I., Suzuhigashi, K., Ishii, Y. and Koike, K.
ACH-receptor in molluscan smooth muscle 698
Takeda, H., Misawa, M. and Yanaura, S.
Bromhexine and lysosomal enzymes 455
Takeda, K.
*See* Uchida, K.
Takeda, R. and Momose, Y.
Ethanol and adrenergic transmission 757
Takemura, H.
*See* Ohshika, H.
Takeo, S.
*See* Sakanashi, M.
Takeuchi, K., Nobuhara, Y. and Okabe, S.
Effect of ethanol on gastric PD and pH 910
Takeuchi, K. and Okabe, S.
Acid back-diffusion and stress 85
Takeuchi, N.
*See* Uchida, K.
Takeuchi, Y.
*See* Matsubara, T.
Taki, K.
*See* Ishikawa, N.
Takino, T.
*See* Nakashima, T.
Takizawa, T.
*See* Nagai, H.
Tanabe, K.
*See* Maki, E.
Tanaka, C.
*See* Nakaike, S.
Tanaka, H., Shuto, K. and Nakamizo, N.
Exacerbation of gastric ulcer 447
Tanaka, Makoto
*See* Muramatsu, M.
Tanaka, Mamoru
*See* Ohshika, H.
Tanaka, T., Ashida, T., Deguchi, F. and Ikeda, M.
$^{3}$H-clonidine and $^{3}$H-rauwolscine binding 713
Tasaka, K.
*See* Kamei, C.
Tazoe, N.
*See* Yamamoto, Tsuneyuki
Terai, M., Usuda, S., Kuroiwa, I., Noshiro, O. and Maeno, H.
$D_2$-specificity of YM-09151-2 749
Terasawa, M.
*See* Goto, K.
Terashima, A.
*See* Yajima, M.
Tobe, A., Egawa, M. and Nagai, R.
Spontaneous alternation and MCI-2016 775
Toda, N.
*See* Fu, L.H.W.
*See* Hattori, K.
Toda, N. and Yamamoto, M.
Angiotensin-induced artery relaxation 1027
Todoki, K.
*See* Okabe, E.
Toibana, E., Ohnishi, R., Fujimoto, Y. and Fujita, T.
Mercurials and lipid peroxidation 1279
Tomita, K.
*See* Negishi, M.
Tomita, N.
*See* Nakaike, S.
Tomono, J.
*See* Ozaki, H.
Tonooka, M.
*See* Nakayama, S.
*See* Yasuhara, H.
Touchi, A.
*See* Matsubara, T.
Tsai, H.-Y., Maeda, S. and Inoki, R.
Somatostatin on 5-HT release 900
Tsuchiya, H.
*See* Nagai, H.
Tsuboi, Takamitsu
*See* Shimoda, M.
Tsuboi, Toshimichi
*See* Fujitani, B.
Tsuchihashi, H.
*See* Nagatomo, T.
Tsumagari, T.
*See* Fukuda, T.
Tsukada, H.
*See* Fujino, S.
Tsuru, H., Shoji, T. and Shigei, T.
Clonidine actions on isolated dog veins 1089
Tsurumi, K.
*See* Kyuki, K.
Tsurumi, K. and Fujimura, H.
Anti-inflammatory drugs on ETX-diarrhea 165

Uchida, K., Mizuno, Hiroko, Hirota, K., Takeda, K., Takeuchi, N. and Ishikawa, Y.
Phytosterol on cholesterol and bile acid 103

Uchida, M.
*See* Fukawa, K.
Uchida, S.
*See* Higuchi, H.
Uchida, Y. and Nomoto, T.
Chlorpromazine and serum FFA 257
Ueda, F. and Urakawa, N.
DIDS and vanadate 894
Ueda, M.
*See* Matsunaga, K.
Ueda, T.
*See* Kinemuchi, H.
Ueki, S.
*See* Araki, H.
*See* Shibata, S.
*See* Yamamoto, Tsuneyuki
Ui, M.
*See* Yajima, M.
Ujiie, A.
*See* Kubota, T.
Umemoto, M.
*See* Nakaike, S.
Urakawa, N.
*See* Karaki, H.
*See* Nakajyo, S.
*See* Ozaki, H.
*See* Ueda, F.
Urano, T.
*See* Tagashira, E.
Uruno, T., Sekiguchi, T., Sunagane, N., Matsuoka, Y. and Kubota, K.
Calcium exchangeability in rat uterus 1
Usuda, S.
*See* Terai, M.

Wada, I.
*See* Yasuhara, H.
Wakabayashi, T.
*See* Murakami, M.
*See* Oketani, K.
Wambebe, C.
GABA and sleep 1111
Watanabe, Hidehiko
*See* Chiba, S.
Watanabe, Hiroshi
*See* Watanabe, Kazuo
Watanabe, K., Watanabe, Hiroshi, Goto, Y., Shimizu, Masao and Maeda-Hagiwara, M.
GBL and GABA on gastric acid secretion 1163
Watanabe, M.
*See* Imaizumi, Y.
Watanabe, S.
*See* Araki, H.
Watanabe, Y.
*See* Lai, R.-T.
Yajima, M., Okamoto, T., Kurokawa, S., Itoh, A., Terashima, A. and Ui, M.
Species differences in IAP actions 583
Yajima, T.
Polyamines, ACh and 5-HT on PD 261
Yamada, H.
*See* Ito, M.
Yamada, K., Iizuka, M. and Takaiti, O.
Trimebutine vs bethanechol in GI tract 301
Yamada, S.
*See* Yamanaka, K.
Yamamoto, I., Ohmori, H. and Sasano, M.
Immunomodulation by CCA 859
Yamamoto, K.
*See* Abe, Y.
Yamamoto, M.
*See* Toda, N.
Yamamoto, S.
*See* Sasakawa, N.
Yamamoto, Toshinori
*See* Yamanaka, Y.
Yamamoto, Toshinori, Egashira, T. and Yamanaka, Y.
Lipid peroxidation in liver microsome 1100
Yamamoto, Toshinori, Egashira, T., Yoshida, T. and Kuroiwa, Y.
Production of tolerance to fenitrothion 691
Yamamoto, Tsuneyuki
*See* Araki, H.
Yamamoto, Tsuneyuki, Tazoe, N., Ueki, S., Shimomura, K., Satoh, Hisashi and Mori, J.
Zotepine and hallucinogens-induced head-twitch 319
Yamanaka, K., Yamada, S., Okada, T. and Hayashi, E.
Picrotoxin and adrenal medulla 1049
Yamanaka, Y.
*See* Yamamoto, Toshinori
Yamanaka, Y., Yamamoto, Toshinori and Egashira, T.
Cephem antibiotics and aldehyde dehydrogenases 717
Methamphetamine and brain catecholamines 33
Yamatsu, I.
*See* Murakami, M.
Yanaura, S.
*See* Akiba, I.
*See* Tagashira, E.
*See* Takeda, H.
Yanaura, S., Kakuno, K., Nakao, K. and Tagashira, E.
Effect of barbital dependence on glycometabolism 395
Yanaura, S., Mizuno, Hiroyuki, Goto, K., Kamei, J., Hosokawa, T., Ohtani, K. and Misawa, M.
A new atropinic antiasthmatic drug 971
Yasuda, K.
*See* Iwamura, M.

Yasuhara, H.
*See* Nakayama, S.
Yasuhara, H., Tonooka, M., Wada, I., Oguchi, K., Sakamoto, K. and Kamijo, K.
Monoamine oxidase in SHR 1057
Yokoyama, Y.
*See* Nakamura, H.
Yonetani, Y. and Iwaki, K.
Uricosuric effect in rats 947
Yoshida, H.
*See* Higuchi, H.
*See* Lai, R.-T.
Yoshida, T.
*See* Yamamoto, Toshinori
Yoshihara, E.
*See* Matsubara, T.
Yoshihara, K.
*See* Kurachi, M.
Yukimura, T.
*See* Abe, Y.

# SUBJECT INDEX


Acetaldehyde 717
Acetic acid ulcer 175
Acetic acid writhing 875
Acetylcholine 698
Acetylcholine-induced contraction 573
Acetylcholine receptor 698
Acid back-diffusion 85
Acid glycoprotein 455
Acidified ethanol 939
Aconitine 503
Action potential 845
Acyclic polyisoprenoids 549
Adenosine 1191
Adenosine diphosphate 219
Adenylate cyclase 79
Adrenal chromaffin cells 1077
Adrenal gland 611, 1049
Adrenalectomy 955
$\beta$-Adrenergic agonist 851
$\beta$-Adrenergic antagonist 219, 851
$\beta_1$-Adrenergic mechanisms 867
$\alpha$-Adrenergic receptor 241, 1089
$\alpha_2$-Adrenergic receptor 713, 1092
$\beta$-Adrenergic receptor 327, 481
Afferent discharges 1096
Aging 241
Airway smooth muscle 971
Aldehyde dehydrogenase 531, 717
7-Alkoxycoumarin O-dealkylase 41
Alloxan 27
Ambulation-increasing effect 1041
Ambulatory activity 927
Amino acids 1225
4-Aminopyridine 201
Aminopyrine N-demethylation 647, 795
Analgesia 875, 933, 1085
Angiography 279
Angiotensin II antagonist 209
Angiotensin-induced relaxation 1027
Aniline hydroxylation 647, 795
Anti-allergic 267, 349, 819
Anti-atopic agent 837
Antibody response 859
Anticholinergic drug 971
Anti-complement activity 819
Anticurare 1183
Antihistamines 1081
Anti-inflammatory drugs 165
Antinociception 619
Antioxidants 803
Antipsychotic drugs 1127
Anti-tumor activity 1205
Antiulcer effect 549
AOAA 1111
Aorta 655
Apomorphine 363
Apparent dissociation constant 95
Arterial strips 65, 145, 227
Arteriole 1233
Ascorbic acid 803
Aspaminol 619, 1135
Aspirin 1027
Aspirin-induced ulcer 593
Asthma 971
Atherosclerosis 279
ATP 495, 837, 1191
Atrium 845
Autoimmune hemolytic anemia 373

Baclofen 933
Barbiturates 395, 659
Barbiturates-dependence 133, 415
Basilar artery 249
Bassianolide 573
Behavior 33
Benzodiazepine 498, 694
Benzodiazepine receptor 906, 1241
Bethanechol 301
Bicuculline 1111
Bile acid 103
Blood acetaldehyde 531
Blood pressure 209, 485
Bradykinin 933, 1085
Bradykinin-like peptide 1119
Bromhexine 455
Brotizolam 706
Bufexamac 121
Butoxamine 1271
$\gamma$-Butyrolactone 1163

Ca spike 1271
$^{45}Ca$ uptake 573, 655, 1155
Cadmium 655
Calcium 1, 619, 627, 991
Calcium antagonist 65, 627, 845, 991
Calcium-contraction 145, 227
Calcium flux 725
Calcium-induced $Ca^{2+}$ release 991
Calcium ionophore (A23187) 725
Carbachol 1

Carbidopa 373
β-Carboline 694
Carbon tetrachloride 435
Carbon tetrachloride intoxication 515
N-(2-Carboxyphenyl)-4-chloroanthranilic acid disodium salt 859
Cardiac dysfunction 17
Cardiac sarcoplasmic reticulum 991
Catalepsy 1081
Catecholamine 33, 1049
Catecholamine metabolism 531
Catecholamine release 1077
Cathepsin D 1119
Cell degeneration 435
Central cholinergic system 257
Cephem antibiotics 717
Cerebral artery 473
Cerebral ischemia 17
Cerebral monoamines 415
α-Chloralose 933
p-Chlorophenyl-alanine 1177
Chlorpromazine 257
Cholesterol 541
Cholesterol diet 279
Chorionic gonadotropin 385
Chronotropism 113
Cinanserin 473
Ciramadol 1085
Circadian variation 927
Clonidine 1089, 1092
Codeine 875
Codeine-epoxide 1293
Cold-restraint stress ulcer 549
Concanavalin A 79
Conditioned avoidance responses 1127
Convulsions 133
Coronary ligation arrhythmia 1035
Crescent 1145
Cross-physical dependence 659
Crossed extensor reflex 694
Crossed immunoelectrophoresis 403
Cyclic AMP 327, 837, 915
Cyclic AMP-dependent protein kinases 385
Cyclic GMP 525, 915
L-Cysteine 735
Cytochrome P-450 41, 423, 435, 647, 999, 1065
Cytoprotection 939, 1263

D 600 249, 1135
O-Dealkylation 1065
Delayed type hypersensitivity 983
2-Deoxy-[$^{14}$C]glucose 635
Dependence 395
Depolarization-induced $Ca^{2+}$ release 991
Desensitization 702
Desipramine 867
Detergent 1007
Dextromethorphan 343
Diabetes mellitus 27
Diabetic animals 965
3,4-Diaminopyridine 1183
Diazepam 65, 95, 706
Diazepam receptor agonists 1163
Diclofenac-Na 121
DIDS 894
3,4-Dihydroxyphenylacetic acid 611
5,7-Dihydroxytryptamine 1177
Diltiazem 1282
Dimemorfan 343
Diphenhydramine 557
Dipyridamole 1027
Disodium cromoglycate (DSCG) 1255
Diuretic 947
DN-1417 635
DNA synthesis 725
Dopamine 611, 897
Dopamine-β-hydroxylase activity 1286
Dopamine receptor 749
Dopamine turnover 706
Dorsal bundle 57
Drug-metabolizing enzymes 647, 795, 1065

EDTA 627
Ehrlich carcinoma cells 343
E.L.4 1205
Endotoxin 1199
Estazolam 1017
Estradiol 525
Estrogen 1107
Ethanol 757, 910
ETX-diarrhea 165
Experimental nephritis 541, 1145

Fenitrothion 691
8-(2-Fluoroethyl)-3α-hydroxy-1αH, 5αH-tropaniumbromide benzilate (Ba598Br) 971
5-Fluorouracil 357, 735
5-Fluorouracil derivatives 1205
Flurazepam 65, 845
Forced swimming test 867
Free fatty acid 1199
Ftorafur 357

GABA 1111, 1163, 1247
GABA receptor 906
Ganglion 1183
Ganglion blocking 463
Gardneramine 463
Gastric emptying 447
Gastric lesions 939
Gastric mucosal blood flow 1263
Gastric mucosal damage 85

Gastric secretion 447, 1163
Gastrointestinal motility 301
Geranylgeranylacetone 593
Gliclazide 965
Glucocorticoid 349, 955
Glucocorticoid receptor 349
Glutamate 1247
Glycometabolism 395

$^3$H-DHA 851
$^3$H-digitoxin 765
$H^+$ dissipating mechanism 85
Habu snake venom 795
Hallucinogens 319
Haloxazolam 1017
Heart mechanoreceptor 503
Helper T cell 859
Hemodynamics 1057, 1286
Hepatic lipid peroxide 515
Hepatic microsomes 795
Hepatotoxicity 435
Hexosamine 447
High potassium 1, 335
Hippocampal kindling 57, 1177
Hirsutine 463
Histamine 1081, 1135, 1255
Histamine release 837
Hormone induction 385
HPLC-ECD 611
HVA 33
Hydrogen ion 1233
Hydroxyl radicals 1233
5-Hydroxymethyl-6-hydroxy-2-isopropylamino-1,2,3,4-tetrahydronaphthalene-1-ol (AA497) 127
5-Hydroxytryptamine 57, 79, 473, 785
5-Hydroxytryptamine release 900
Hyperalgesia 264, 709, 1289
Hyperlipidemia 279
Hypersensitivity 765
Hypocholesterolemic effect 103
Hypothalamus 885

Immune response 1205
Immunomodulation 859, 983
Immunopathology 1145
Immunopotentiator 189
Indomethacin 121, 1035
Inflammation 264
Inotropism 113
Insulin 583
Intestinal tract 335
Intestinal transport 261
Intestine 409
Islet-activating protein 583
3-Isobutyryl-2-isopropylpyrazolo-[1,5-a]pyridine 267
Isoproterenol 811
Kappa receptor 1289
KC-404 267, 1215
6-Keto-$PGF_{1\alpha}$ 563
Kinins 485
KZ-111 1215

Lateral vestibular nucleus 557
Laurate-$\omega$-hydroxylation 999
Lead ions 9
Leucotriene 1215
Leukocytosis 583
Lever-pressing 1127
Levodopa 373
Lipid peroxidation 803, 1100, 1279
Lipophilicity 219
Lipopolysaccharide 189
Local anesthetic action 219
Local anesthetics 503, 603, 1096
Local cerebral glocose utilization 635
Locus coeruleus 253
Low rate responding 498
Luminal pH 910
Lymphocyte transformation 983
Lysosomes 9, 455

Macrophage 189
MAO activity 1057
MAO-A and MAO-B 1007
Mast cell 1255
Mastocytoma cells 725
MCI-2016 775
Medial vestibular nucleus 557
Memory impairment 775
Meprobamate 1171
Mercurials 1279
Met-enkephalin 900
Methamphetamine 33, 363
3'-Methyl-4-dimethyl amino azobenzene 1100
$\alpha$-Methyl-p-tyrosine 1177
$\alpha$-Methyldopa 373
MHPG-$SO_4$ 33
Microcirculation 891
Microsome 41, 999, 1100
Mitochondria 1279
Mizoribine 541
Molluscan smooth muscle 698
Monoamines 1225
Morphine 73, 309, 619, 671, 681, 829
Morphine-epoxide 1293
$\gamma$-Motor system 1017
MSR 1017
Mucolytic action 455
Muscarinic cholinergic receptor 702
Myelin 181, 492

Na deficiency 1155
Na-K ATPase activity 765
Na-nitroprusside 489
NADPH-cytochrome *c* reductase 423
Naloxone 73, 709
Neuraminidase-treatment 851
Neuroleptics 749
Neurotropin 291
Neutral salts 647
Nicotinic receptor 463
Nifedipine 335
Nitroglycerin 1282
Nonprotein sulfhydryls 939
Non-steroidal anti-inflammatory drugs 447
Noradrenaline 57, 249, 525, 563, 785
Norepinephrine *See* Noradrenaline
NSAID 165
Nutrient transport 725

Opiate receptor 253, 1293
Opioid 73, 1104
Osmolarity 246
Oxytocin 1, 1107

Palytoxin 1155
Papaverine 619, 1135
Penicillamine-cysteine 983
Pentobarbital 635
Pentobarbital anesthesia 209
Pepsin output 85
Peritoneal exudate cell 837
Pertussis toxin 583
pH gradient 9
Phenobarbital 1171
Phenylephrine 563
Phosphatidylserine 181
Phospholipase $A_2$ inhibitor 1077
Photoaffinity labeling 327
Phthalazinol 1027
Physical dependence 309, 1171
Picrotoxin 1049
Plaque forming cells 983
Plasma catecholamines 209, 531
Plasma renin activity 209
Plateau 845
Platelet aggregation 219
Platelets 79
Polyamines 261, 939
Polysaccharides 403
Positive chronotropic action 1191
Positive inotropic action 897
Postnatal development 906
Potassium-induced contraction 246, 655
Potassium permeability 155, 201
Potassium release 811
Practolol 1271
Precerebellar nuclei 671
Probenecid 611
Propranolol 17, 133, 603, 1057, 1286
Prostacyclin 1107, 1035
Prostaglandin 165, 485, 1035
Prostaglandin $D_2$ 264
Prostaglandin $E_2$ 563, 1263
Prostaglandin $F_{2\alpha}$ 1263
Prostaglandin $I_2$ 965, 1027
Proteinuria 541, 1145
Proteolipids 181
Psychotropic drug 885
Pulmonary mechanoreceptor 1096
Pulmonary venous return curve 785
Purinergic receptor 1191
Purkinje cell 681

Quaking mouse 492

Raphe lesions 57
Rat brain slice 1225
Receptor tolerance 95
Renin release 627, 803
Renomedulla 563
Repetitive synaptic firing 1183
Reserpine 17, 1177
Rigidity 1241
Rotational behaviour 363

SA node 113, 357, 495, 1191
Salicylic acid 1199
Sarcoma-180 cells 343
Scopolamine 775, 927, 1041
Screening of antitumor polysaccharide 403
Self-stimulation 498
Serotonin *See* 5-Hydroxytryptamine
Serum free fatty acid 257
Sex-dependent low molecular weight proteins 309
Single sucrose gap 1271
Sitosterol 103
Skeletal muscle 73
Sleep 1111
Smooth muscle 155, 201, 246
Sodium copper chlorophyllin 819
Somatosensory area I 671
Somatostatin 900
Spare receptor 327
Species differences 41, 583, 1065
Spinal cord 1247
Spinal reflex 1241
Spinasterol 103
Spontaneously hypertensive rats 1057
SQ 14,551 485
SRS-A 267
Starvation 999
Steroids 165, 385

Stress 85
Stress-induced analgesia (SIA) 1104
Stroke-prone spontaneously hypertensive rats 17
Strychnine seizure 1017
Substance P 1255
Sulfamonomethoxide 903
Sulfhydryl reagents 79, 145, 227
Sulfonylureas 965
Superoxide radicals 1233
Supersensitivity 291
Suppressor T cell 859
Suprachiasmatic nucleus 1225
Sympathectomy 291
Synaptic transmission 1183

Taenia coli 573, 894
Taurine 515, 1247
Tetraethylammonium 155, 201
1-(Tetrahydro-2-furanyl)-5-fluorouracil 735
Tetrodotoxin 503
Thiamine 27
Thyrotropin-releasing hormone (TRH) 635, 915
Tolerance 691, 709, 1041
Tooth pulp 933
Topical anti-inflammatory effect 121
Trachea 155
Tracheal submucosal gland 455
Transmucosal potential 910
Transmural potential 261
Tranylcypromine 133
Traxanox 189
TRH analog DN-1417 915
Trimebutine 301
Trimetazidine 891
Triton X-100 1007
Tryptamine 473, 492
Tryptamine binding 181

U-50488H 1289
Ulcer 175, 447
Uric acid 947
Uricosuric drug 947
Urinary bladder 463
Uterus 525

Vagotomy 291
Vanadate 894
Vas deferens 489, 757
Vascular smooth muscle 1155
Vasodilatation 891
Venule 1233
Verapamil 335, 503, 627

Withdrawal signs 395, 1171

YM-09538 897

Zomepirac sodium 875
Zopiclone 1241
Zotepine 319, 363